

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Claims 1-20 are pending; Claims 4, 9, and 12 are amended; Claims 18-20 are newly added; and no claims are canceled herewith. It is respectfully submitted that no new matter is added by this amendment, as support may be found, for example, in the specification at page 8, lines 3-7, page 14, line 25 through page 15, line 3, and Figure 1.

In the outstanding Office Action, Claims 1, 4, 7-10, 12, 16, and 17 were rejected under 35 U.S.C. § 103(a) as unpatentable over Nagao (U.S. Pat. No. 6,677,674) in view of Kimura et al. (U.S. Pat. No. 6,078,096, hereafter Kimura) and further in view of Kim et al. (U.S. Pat. No. 6,594,818, hereafter Kim); Claims 5, 6, and 13-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Nagao in view of Kimura and further in view of Kim and Majima (U.S. Pat. No. 4,408,875); and Claims 3 and 11 were indicated as allowable.

Applicant acknowledges with appreciation the indication that Claims 3 and 11 contain allowable subject matter. Because these claims have not been amended herewith, it is respectfully submitted that Claims 3 and 11 remain allowable.

With regard to the outstanding rejection of Claims 1, 4, 7-10, 12, 16, and 17 under 35 U.S.C. § 103(a) as unpatentable over Nagao, that rejection is respectfully traversed.

Claim 1 relates to a COC device, comprising:

a memory chip mounted on the logic chip, the memory chip comprising:

basic chips functioning as a chip independently from each other; and

a dicing line interposed between the basic chips, connecting the basic chips, and configuring a part of the memory chip

Independent Claim 9 recites analogous features.

Through the claimed configuration, the memory capacitance of memory chips cut from one wafer may be freely varied depending on how the memory chips are cut. According to the claimed configuration, the dicing line is formed between basic chips to configure a part of the memory chips, and the dicing line does not have a logic circuit linking the basic chips therein. Accordingly, the way in which the memory chip is cut is not limited.

The outstanding Office Action relies upon a combination of Nagao, Kimura, and Kim to anticipate the features of independent Claims 1 and 9. In more detail, the outstanding Office Action alleges that Kimura teaches that chips are separated from a mother wafer by dicing means.¹ In fact, Kimura does not disclose or suggest a dicing line, as recited in Claim 1.

Rather, Kimura discloses a redundancy technology in which only one type of memory chip is cut from a wafer. For example, according to Figure 2 of Kimura, the area where the wafer is cut out is predetermined, and the memory chip is cut out in only one way. In the example in Figure 2 of Kimura, only a 16 Mbit memory chip (four 4 Mbit memory chips) may be cut from one wafer. Likewise, according to Figure 8 of Kimura, only an 8 Mbit memory chip (two 4 Mbit memory chips) can be cut from a wafer. As further illustrated in Figures 5-7 of Kimura, when a faulty area is discovered, the faulty area is not treated as a defective chip. Rather, the faulty area is discarded by dicing.²

In Kimura, a logic circuit 7 linking basic chips is provided between the basic chips to perform redundancy. For example, as shown in Figure 9 of Kimura, logic circuit 7 transmits and receives signals between two basic chips. In this case, the area between the basic chips (e.g., dicing line 5₅, 5₆) is used to discard the faulty area from the chips.

By contrast, the dicing line of the present invention excludes a logic circuit linking the basic chips. In fact, according to the claimed invention, the basic chips divided by the dicing

¹ Applicants note that no specific passages of Kimura were cited to support this assertion.

² Kimura, col. 4, lines 62 - col. 5, line 7.

line must be mutually independent. As a result, it is respectfully submitted that Kimura does not disclose or suggest the dicing line of Claim 1.

Moreover, because the basic chips of Kimura are always interdependent, it is not possible to combine the teachings of Kimura with Kim. Kim describes mutually exclusive chips.³ Therefore, to combine the teachings of Kimura, which relates to interdependent chips with the disclosure of Kim, which relates to exclusive chips, is contrary to the teachings of each of these references.

As set forth in MPEP § 2143.01, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680 (Fed. Cir. 1990). Furthermore, the proposed modification cannot change the principle of operation of a reference. In other words, if the proposed modification or combination of the prior art would change the principle of operation the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. In re Ratti, 270 F.2d 810 (CCPA 1959).

In this case, because the outstanding Office Action proposes to modify the teachings of a reference (Kimura) which describes interdependent chips with the teachings of another reference (Kim) which teaches mutually exclusive chips, it is respectfully submitted that the outstanding Office Action has violated the requirements set forth in MPEP § 2143.01. In more detail, changing the interdependent chips of Kimura to include mutually exclusive chips changes Kimura's principle of operation.

Therefore, the outstanding Office Action has violated the requirements of MPEP § 2143.01, and it is respectfully submitted that the outstanding Office Action has failed to provide a *prima facie* case of obviousness with respect to Claims 1, 4, 7-10, 12, 16, and 17.

³ See, Kim, Abstract.

Because the outstanding Office Action has not provided a *prima facie* case of obviousness, it is respectfully requested that this rejection be withdrawn.

Likewise, the rejection of Claims 5, 6, and 13-15 is also respectfully traversed.

Claims 5 and 6 depend from Claim 1, and Claims 13-15 depend from Claim 9. As noted above, the combination of Nagao, Kimura, and Kim does not provide a *prima facie* case of obviousness with respect to the features of Claims 1 and 9. Because Majima is not relied upon to provide the features identified as deficient in the applied combination, Majima is not substantively addressed herewith.

Therefore, as the outstanding Office Action has not provided a *prima facie* case of obviousness with respect to Claims 5, 6, and 13-15, it is respectfully requested that this rejection be withdrawn.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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